

**Standard 12****BIOLOGY****Part - I (Bio- Botany)****Section - A**

Time: 1.30 Hours

Marks: 50

Marks: 25

- I. Choose and write the correct answer with option code: 5×1=5**
- Which of the following are not regulating services of ecosystem services?
 - Genetic resources
 - Recreation and aesthetic value
 - Invasion resistance
 - Climatic regulation
 - i and iii
 - ii and iv
 - i and ii
 - i and iv
 - The Ozone layer of troposphere is called
 - Middle ozone
 - Ozone shield
 - Bad Ozone
 - Good Ozone
 - Depletion of which gas in the atmosphere can lead to an increased incidence of skin cancer?
 - Ammonia
 - Methane
 - Nitrous oxide
 - Ozone
 - Match column I with column II

Column I	Column II
i) William S Gaud	I. Heterosis
ii) Shull	II. Mutation breeding
iii) Cotton Mather	III. Green Revolution
iv) Muller and Stadler	IV. Natural Hybridisation

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|--------|----|-----|-----|
| i | ii | iii | iv |
| a) I | II | III | IV |
| b) III | I | IV | II |
| c) IV | II | I | III |
| d) II | IV | III | I |
 - Which is the right representation of inverted pyramid food chain?
 - Grasses → Rats → Snake → Hawk
 - Banyan Tree → Tree Birds → Beefles → Fungi
 - Phytoplanktons → Zoo planktons → Fishes → Snakes
 - Plants → Rats → Snake → Hawk

Section - B

- II. Answer any three questions: 3×2=6**
- Define Ten percent law
 - Differentiate primary introduction from secondary introduction
 - What are the objectives of clean development Mechanism
 - What is CCS?
 - Write only the trophic levels of Detritus food chain.

Section - C

- III. Answer any three questions: 3×3=9**
- Draw a pyramid from the following details. Hawk - 50, Plants - 1000, rabbit & mouse 250+250, pythans & Lizard 100+50.
 - Write a short note on Heterosis
 - Which one gas is most abundant out of the four commonest green house gases? How that gas affect the plants (any 3)
 - Write a short note on PAR. (Photosynthetically Active Radiation)
 - What is Green House Effect? Draw the relative contribution of Green house gases

Section - D

- IV. Answer the following: 1×5=5**
- What are the effects of deforestation and benefits of agroforestry
(OR)
 - List out the types of ecosystem with examples.

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Part - II (Bio- Zoology)

Marks: 25

Section - A

I. Write correct answers:

5×1=5

- 1) The most common substrate used in a distilleries for the production of ethanol is
 - a) Soyameal
 - b) Groundgram
 - c) Molasses
 - d) Corn meal
- 2) Recombinant factor VIII is produced in the cells of the Chinese Hamster
 - a) Liver cells
 - b) blood cells
 - c) Ovarian cells
 - d) brain cells
- 3) Red data book is published by
 - a) WWF
 - b) ZSI
 - c) ICUN
 - d) UNEP
- 4) Cyclosporin - A is an immunosuppressive drug produced from
 - a) Aspergillus niger
 - b) Manascus purpureus
 - b) Penicillium notatum
 - d) Trichoderma Polysporum
- 5) Match the following and choose the correct combination from the option given below

Column I	Column II
A. Mutualism	1. Lion and Deer
B. Commensalism	2. Round worm and Man
C. Parasitism	3. Birds Compete with squirrels for the nuts
D. Competition	4. Sea anemone on hermit crab
E. Predation	5. Bernaeles attached to whales

Section - B

II. Answer any three questions:

A-4, B-5, C-2,
D-3, E-1

3×2=6

- 6) What is biological oxygen demand.
- 7) What is genetically engineered insulin?
- 8) What are transgenic animals? Give examples?
- 9) What is a habitat?
- 10) Differentiate Natality and Mortality

Section - C

III. Answer any three questions:

3×3=9

- 11) Differentiate between somatic cell gene therapy and germline gene therapy
- 12) Write the key features of organic farming - *which is referred as industrial alcohol why*
- 13) What is soil permeability
- 14) Explain hibernation and aestivation with examples
- 15) What is the key difference between primary and secondary sewage treatment

Section - D

IV. Answer any three questions:

1×5=5

- 16) List the advantages of biogas plants in rural areas

List the advantages and disadvantages of cloning
Give an account of properties of soil